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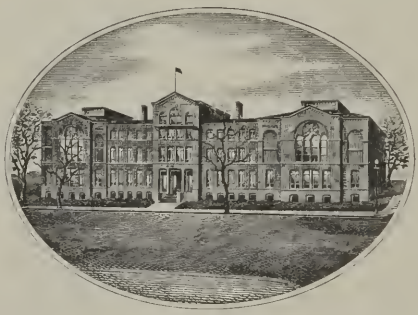

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U. S. Department of Health, Education, and Welfare

Public Health Service

COLLECTIONS

FOR

AN ESSAY

TOWARDS A

MATERIA MEDICA

OF THE

UNITED-STATES.

READ BEFORE THE PHILADELPHIA MEDICAL SOCIETY, ON THE TWENTY-FIRST OF FEBRUARY, 1798.

BY BENJAMIN SMITH BARTON, M. D.

ONE OF THE HONORARY MEMBERS OF THE SOCIETY,
AND
PROFESSOR OF MATERIA MEDICA, NATURAL HISTORY, AND BOTANY,
IN THE UNIVERSITY OF PENNSYLVANIA.

" Sunt Simplicia desumpta e triplici Naturæ Regno: e Lapideo, Vege-
" tabili & Animali; heic VEGETABILIA tantum depromsi, quæ maximam
" constituunt Materiæ Medicæ partem, alio tempori reservans cetera."
LINNÆUS.

FIDEM NON ABSTULIT ERROR.

PHILADELPHIA:

PRINTED, FOR THE AUTHOR,
BY WAY & GROFF, No. 27, ARCH-STREET.
1798.

TO

JAMES EDWARD SMITH, M. D. F. R. S.

PRESIDENT OF THE LINNÆAN SOCIETY,

MEMBER OF THE ROYAL ACADEMIES OF TURIN, UPSAL, AND LISBON;

AND

MEMBER of the AMERICAN PHILOSOPHICAL SOCIETY, &c.

Dear Sir,

I CANNOT expect to add any thing to your reputation, by dedicating to you the following pages. I mean not, by this act, to choose a patron who shall veil my faults, or screen me from the censure of the public critic. The actions of men, particularly perhaps of young men, are sometimes disinterested. It is with pleasure I declare to the public, how much I admire your exertions for the extension of that amiable science which both of us cultivate: you with the happiest success; I with an humble ardour.

The age in which we live is the age of natural science. The mind of Linnæus has effected more than the combined intellects of all the naturalists of any preceding century. Natural history, however, is still an infant science. This is particularly the

caſe with reſpect to America. Even the *nomenclature* of our productions is extremely imperfect. We are ſtill leſs acquainted with the *properties* of our productions. I view this blank in the hiſtory of ſcience, with pain. This pain, however, is daily diminiſhed: for ſomething is daily added to the ſtock of our knowledge.

I AM far from inſinuating, that what I offer you is important in its kind. I am fully ſenſible of the imperfections of this Eſſay. I could wiſh it were more worthy of your attention. If I ſucceed in convincing you, that there are ſome lovers and cultivators of botany in the United-States, one of my objects in writing this dedication will be accompliſhed.

ACCEPT of my ſincere wiſhes for your happineſs, and believe me to be, with great reſpect,

Dear Sir,

Your friend and humble ſervant, &c.

BENJAMIN SMITH BARTON.

Philadelphia,
March 12th, 1798.

PREFACE.

I HOPE the following pages will be received as an earneſt of my deſire to extend our knowledge of the medical properties of the indigenous vegetables of the United-States. I do not expect to acquire any reputation by the publication. Perhaps, in making this aſſertion, I ſhall not be doubted, when I confeſs that in every thing which I have hitherto publiſhed, I have had reputation in view. If I have not acquired it, I have borne the diſappointment with tranquil indifference.

THE readers of theſe *Collections* (for every thing that is written and publiſhed ſolicits ſome readers), will form different opinions about my medical faith. Some of them will think I have too much; and others that I have not enough. I certainly do not repoſe implicit confidence in the half of what is ſaid concerning the powers of medicines. Accordingly, I have not given a place in theſe pages to many of our vegetables which have been praiſed as ſpecifics for the cure of diſeaſes; in particular, as ſpecifics againſt the bites of venomous ſerpents. But, on the other hand, it will be aſked, whether I mean

that all the different vegetables which I have mentioned, ſhould have a place in the materia medica of phyſicians? I anſwer, No. But how are we to know what plants are moſt proper for the purpoſes of medicine, until we ſhall have examined the properties of a great body of vegetables? The Digitalis is now thought one of the moſt important of the diuretic medicines: but perhaps future inquiries will diſcover a diuretic which ſhall, in a great meaſure, ſuperſede the frequent uſe of this active plant. I wiſh to turn the attention of our phyſicians to an inveſtigation of the properties of their native productions. When it is conſidered how little has hitherto been done in this way, every attempt (mine is an humble one) ſhould be candidly received. I do not mean that its faults ſhould not be pointed out.

The arrangement of the articles which I have mentioned is by no means faultleſs: on the contrary, it is liable to many objections. I ſhould not have followed this arrangement had I been conſidering *all* the articles of the materia medica. I ſhall give a ſketch of my ideas of a method of the ſcience, in my ſtrictures on the arrangement of the learned and elegant author of the *Botanic Garden*, a poem which unites the fire of Lucretius with the taſte of Virgil, and a learning unequalled by that of Camoëns or of Milton.

I THINK it but candid to confeſs, that ſince reading this addreſs to the Medical Society, I have made ſome alterations in it. Theſe alterations, however, are very inconſiderable. In general, even the very ſtyle and faults of each phraſe are preſerved, for I had not time to alter or correct much. I have left out the concluding part of the addreſs, relative to the eſtabliſhment of a medical library: not that I doubt the ability of the ſociety to form a library of its own. The notes contained in the appendix were not read to the ſociety.

WHATEVER may be the reception of this eſſay by the public, whether favourable or unfavourable, I ſhall purſue my inquiries concerning the nature and properties of the natural productions of my native country. I ſhall purſue them, becauſe there is at leaſt a poſſibility that they may ultimately tend to ſomething uſeful: and becauſe I have the experience of ſeveral years to teach me, that the cultivation of ſcience is the extenſion of my happineſs.

ERRATUM.

Page 13. *For* Cornus Cincinata, *read* Cornus circinata.

COLLECTIONS, &c.

Gentlemen,

WE have assembled together to celebrate the anniversary of our foundation. It is an occasion which ought to give pleasure to us all. We have met, however, for the difficult purpose of mingling science with pleasure. This difficulty falls peculiarly upon me. By your vote, I have been called upon to deliver the annual discourse. I accepted of the appointment cheerfully, because I was anxious to demonstrate my attachment to the Society, of which I had the honor to be a member at a very early period of my life; a Society in which I first imbibed my love of the different sciences which constitute the great fabric of medicine.

But if I accepted of the appointment with pleasure, I do not address you with confidence. I have found it difficult to select a subject for your

entertainment. I, at one time, contemplated a comparative view of the different theories which have prevailed in medicine, in the preſent century. But I ſoon found this ſubject too extenſive for our purpoſe: beſides, in the inveſtigation of this view, I ſhould have been obliged to ſpeak with a freedom, which might not have given pleaſure to every one of us. Men are often attached to theories, as parents are attached to their children.

After ſome difficulty, I have ſelected a ſubject. It is An Eſſay towards a materia medica of the United-States; or, if you pleaſe, An Inquiry what indigenous vegetables of our country may be uſed with advantage in the treatment of diſeaſes. This, you will immediately perceive, is a taſk both extenſive and difficult. But it is an important one. I ſhall not, perhaps, perform a duty altogether unacceptable to you, if I furniſh you with a few facts, not generally known to you before. This is all I aim at.

Mine is not the firſt attempt of this kind. Beſides the paper entitled *Specifica Canadenſium*,* Dr. Schoepf, of Erlangen in Germany, has favoured us with a ſpecimen of ſuch a work, under the title of *Materia Medica Americana potiſſimum regni vege-*

* See Amoenitates Academicæ. Vol. iv. Diſſertatio lxxii.

tabilis. This work was printed in 1787. The author arranges the articles according to the ſexual ſyſtem of Linnæus. This, though an objection, is not the greateſt. He has given us nothing from his own experience. He aſcribes active powers to plants which are nearly inert, and appears to me to be, in ſome meaſure, governed by the old notion of Signatures: one of the tyrants of the ancient ſchools. He diſcovers none of that infidelity, or, if you pleaſe, ſcepticiſm, which ought ever to be attached to phyſicians: I mean not an infidelity relative to religion; but an unwillingneſs to acquieſce, without good proofs, in the truth of every tale concerning the powers of medicines. This pliant, this credulous diſpoſition, has been one of the cauſes which have obſtructed the regular march of medical ſcience. But as the effort of Schoepf is the beſt of the kind, ſo we ought to tread lightly on his work. He is at leaſt a man of learning; and learning ſhould always claim indulgence from the lovers and cultivators of ſcience.

I AM far from ſuppoſing that it is in my power, eſpecially on this occaſion, to ſupply all the defects of Schoepf's book. It would be eaſy to point out its faults. I aim at a rude ſketch of our materia medica. It is ſo extremely unfiniſhed, that I have no objection to its being called by any inferior name. I confine myſelf entirely to vegetables.

MATERIA ALIMENTARIA.

YOU are all acquainted with the great general diviſion of the materia medica into two parts: that which relates to the aliments, or *nutrientia*, of mankind, and the medical part, more ſtrictly ſo called. Each of theſe is highly important; but I mean in this addreſs to confine myſelf almoſt entirely to the latter branch. Yet the former ſhould claim ſome of our attention. Much may be expected from a country which has bleſſed us with the maize, the potatoe, &c. I could readily furniſh you with a long liſt of the indigenous nutrientia of this country; but ſuch a liſt would be very unintereſting. On this ſubject, however, an uſeful work might be written. He who ſhall undertake to examine the ſubject extenſively will find, that Providence has, in the gift of eſculent vegetables, been as liberal to the countries of the United-States, as to any other countries of the world, of equal extent.

UNDER this head of the nutrientia, I ſhall content myſelf with mentioning two native articles, which deſerve the attention of phyſicians and others. Perhaps, they may even ſuperſede, on many occaſions, the uſe of ſome other articles, which are purchaſed at a pretty dear rate.

THERE grows upon the river Mobile a ſpecies of palm, which is but little known to naturaliſts, but which promiſes to be an important article of food to man. It has no ſtalk or ſtem above ground. The leaves ſpread regularly all round, and when fully expanded are flabelliform. In the centre of theſe leaves is produced the receptacle of the fruit, which is of the form and ſize of a common ſugar-loaf. This receptacle conſiſts of a vaſt number of drupes, or berries, of the ſize and ſhape of common plumbs: each is covered with a fibrous, farinaceous, pulpy coating of conſiderable thickneſs. This ſubſtance is ſaid to reſemble manna in texture, colour and taſte; or, perhaps, it ſtill more reſembles moiſt brown ſugar, with particles of loaf ſugar mixt with it. It is a moſt delicious and nouriſhing food, and is diligently ſought after in the places where it grows. Upon firſt taſting it, it is ſomewhat bitter and pungent.*

THE large tuberous roots of the Smilax China afford our ſouthern Indians a nouriſhing food. The freſh roots are well macerated in wooden mortars. The maſs is then put into veſſels nearly filled with clear water, where it is well mixed with paddles: It is decanted off into other veſſels, where it is left to ſettle, and after the ſubſidence is com-

* From the information of Mr. William Bartram. MS *penes me.* Vol. i.

pleted, the water is caſt off, leaving the farinaceous ſubſtance at the bottom. When this is taken out and dried, it is an impalpable powder of a reddiſh colour. Mixed with boiling water, it becomes a beautiful jelly, which, when ſweetened with honey or ſugar, affords a moſt nouriſhing and pleaſant food for children or aged people. The Indians ſometimes uſe it mixed with fine corn-flour, and fryed in freſh bears' oil.*

The chemical hiſtory of the maize, or Indian corn, the bleſſing of our country, deſerves to be farther inveſtigated. Its importance as an article of diet is ſufficiently eſtabliſhed by the experience of whole nations.

MATERIA MEDICA.

I AM not very anxious, on this occaſion, about my diviſion of the materia medica. I have attempted, in my lectures, to make ſome improvements upon the arrangement of Dr. Cullen; and, if I live, I hope to publiſh, in a few months, my ſtrictures on the late arrangement of the ingenious Dr. Darwin. At preſent, in poſſeſſion of only a ſmall collection of original facts immediately relative to the materia

* From the information of Mr. William Bartram. MS *penes me.* Vol. i.

medica of the United-States, I ſhall content myſelf with diſpoſing of theſe facts under the nine following heads, viz. 1. ASTRINGENTS; 2. TONICS; 3. STIMULANTS; 4. ERRHINES; 5. SIALAGOGA, or SALIVATING MEDICINES; 6. EMETICS; 7. CATHARTICS; 8. DIURETICS; 9. ANTHELMINTICS.

SECT. I. ASTRINGENTS.

I THINK it proper, in the preſent ſtate of our knowledge of medicines, to give place to a claſs of ASTRINGENTS. There is the more propriety for the adoption of ſuch a claſs, becauſe we ſee more readily, than with reſpect to many other medicines, their direct mode of operation. Our vegetable aſtringents, I mean the purer and more unmixed aſtringents, are numerous. The barks of all our oaks are of this kind. But I may here particularly mention three or four native aſtringents, which ſeem to be more eſpecially entitled to your attention.

THE firſt is the Geranium Maculatum, or Spotted Geranium, which grows very plentifully about this city: it flowers in the ſpring. The root is uſed: this boiled in milk has been found an excellent medicine in the cholera of children. It is not neceſſary to be very nice about the doſe. I imagine it would alſo prove uſeful in old diarrheas, where

the kino, and other aſtringents are exhibited. If nephritis, of certain kinds, be relieved by aſtringents, this geranium would ſeem entitled to attention, not merely becauſe it is a powerful aſtringent, but becauſe a ſpecies of the ſame genus, the Geranium robertianum, or Herb-Robert, has been employed with advantage in this diſtreſſing complaint.*

The Heuchera Americana is the next aſtringent. This is ſometimes called American Sanicle. It is more commonly called Alum-Root. The root is a very intenſe aſtringent. It is the baſis of a powder which has lately acquired ſome reputation in the cure of cancer. I ſuppoſe all its virtue, in this caſe, depends upon its aſtringency. I may here obſerve, that the diſeaſe of cancer is not confined to civilized nations. It is known among our Indians. I am informed that the Cheerake cure it with a plant which is thought to be the Hydraſtis Canadenſis, one of our fine native dies. I do not believe that the Heuchera has cured genuine cancer: but it ſeems certain that it has proved very beneficial in ſome obſtinate ulcers, which have been miſtaken for cancer. In ſuch caſes, the aſtringent medicines are too much neglected.

* I am not certain that the Geranium robertianum is a native of any part of America.

The Actæa racemoſa, or Black Snake-root, is alſo a valuable medicine. It is ſometimes called Squaw-root, I ſuppoſe from its having been uſed as a medicine by our Indians. The root of this plant is conſiderably aſtringent. In a putrid ſore throat which prevailed in Jerſey, many years ago, a ſtrong decoction of the roots was uſed, with great benefit, as a gargle. Our Indians ſet an high value on it. A decoction of it cures the itch. In North-Carolina, it has been found uſeful, as a drench, in the diſeaſe of cattle called the murrain.

The Uva Urſi* is conſiderably aſtringent. Yet I ſuſpect that it does not operate entirely by virtue of its aſtringent quality. This plant, from my own experience, I can recommend to you as a moſt valuable medicine. It ſhould be in the hands of every phyſician. I have uſed it with advantage in old gonorrhea. But its great virtue is that of a medicine in nephritis. I am inclined to think that it is peculiarly adapted to caſes of what I call nephritis podagrica, or nephritis depending upon gout. This is one of the plants which is common to the old and to the new-world. It grows plentifully in Canada, New-York, New-Jerſey, &c. Schoepf ſays, the Indians mix the leaves with tobacco.†

* Arbutus Uva urſi of Linnæus. † Page 68.

The Liquidambar aſplenifolium * of Linnæus is well known by the name of Sweet-Fern. It has often been found uſeful in diarrhea. Other virtues have been aſcribed to it.†

Sect. II. TONICS.

I believe all the aſtringent medicines are more or leſs Tonic. But there are a good many tonics which are not aſtringent. There is, certainly, ſome propriety in conſidering the aſtringents and tonics under two diſtinct heads, as Dr. Cullen has done. But, perhaps, the tonics ſhould only form one ſection of the great claſs of ſtimulants. Certain it is, that many of the tonic medicines are conſiderably ſtimulant.

The claſs of tonics is extremely intereſting to phyſicians. It embraces ſome of the moſt valuable medicines with which we are acquainted, ſuch as the Peruvian bark, the extenſive tribe of bitter medicines, as the gentians, &c. The natural infirmities of mankind, and perhaps eſpecially the vices to which civilized nations are ſo propenſe, will always render the tonics moſt neceſſary implements in the hands of phyſicians.

* Comptonia aſplenifolia of Aiton. † See Schoepf, p. 142.

Our woods poſſeſs ſeveral medicines which I am inclined to think might to be uſed, with advantage, as ſubſtitutes for the Peruvian bark. Perhaps, moſt of our Oaks, which are in general different from the oaks of the old-world, are of this kind. Sufficient trials have not been made with them; at leaſt *internally* uſed. *Externally* ſome of them have been employed with advantage. I have uſed the bark of the Spaniſh oak * in gangrene, and I had every reaſon to think it was, in this caſe, equal in power to the beſt Peruvian bark. The bark of the Prunus Virginiana, or Wild-Cherry-tree, has been uſed in intermittent fevers, and found uſeful. This is a very common tree. Its leaves are poiſonous to certain animals, as calves. Even the berries intoxicate different kinds of birds. The barks of the Common Saſſafras (Laurus Saſſafras) and Perſimmon (Dioſpyros Virginiana) have likewiſe been found uſeful in intermittents. In the year 1793, I uſed the bark of the laſt of theſe vegetables in an ulcerous ſore throat. † Our Willows have not been attentively examined. We have ſeveral native ſpecies, and I believe they poſſeſs nearly the ſame properties which have been aſcribed to the willows of

* Quercus rubra montana of Marſhall.

† Dr. Woodhouſe has favoured us with ſome intereſting information concerning the Perſimmon. See his Inaugural Diſſertation. Philadelphia: 1792.

Europe, * by Stone, Haller, and other writers. The Dogwood is a genus which ſeems well worthy of attention. Of this, the Cornus of the botaniſts, there are ſeveral ſpecies in North-America. The moſt common is the Cornus Florida, or Common Dogwood. I find this in every part of the United-States. It is one of our moſt beautiful ſhrubs. It flowers early in the ſpring, and with ſo much regularity, that ſome of our ſouthern tribes were accuſtomed to name the ſpring ſeaſon from its flowering. The bark is conſiderably aſtringent. It has long been employed in intermittent fevers. A decoction of it has alſo been employed, and found very uſeful, in a malignant fever, called the yellow water, Canada diſtemper, &c. which, within the laſt eight years, has carried off great numbers of the horſes in the United-States. The ripe fruit, or berries, infuſed in ſpirit or brandy, make an agreeable bitter. Our Indians employ an infuſion of the flowers in intermittents. The ſame infuſion has been much recommended by ſome in flatulent cholic. I have uſed it as a tea.

The Cornus ſericea, another ſpecies, is called Red-Willow and Roſe-Willow; which are very improper names. The bark of this is often mixed with tobacco and ſmoken by the ſavages. It has

* Particularly the Salix alba, Salix pentandra, Salix latifolia, &c.

been found but little inferior to the common pale Peruvian bark, in intermittent fevers. This ſpecies grows in wet places, on the ſides of rivers, creeks, &c. and flowers in Auguſt and September. I know nothing of the medical properties of the other native ſpecies of this genus; viz. Cornus Canadenſis, Cornus Cincinata, &c.

MANY years ago, Zannichelli, and of late, Cuſſon and other writers, recommended the bark of the Æſculus Hippocaſtanum, or Common Horſe-Cheſnut, as a ſubſtitute for the Peruvian bark. This Æſculus is not a native of America, though it thrives very well in the open ground of Pennſylvania, &c. But we have at leaſt two native ſpecies of the ſame genus within the limits of the United-States.* Whether the bark of theſe poſſeſs the properties which have been aſcribed to the Hippocaſtanum, I do not know. They deſerve to be examined.

I MUST not omit to mention, under this head, the Magnolias. Of this fine genus, we have at leaſt ſix ſpecies, viz. the Magnolia glauca, the acuminata, the tripetala, the grandiflora, the auriculata, and the Fraſeri. I believe they all poſſeſs nearly one general aſſemblage of properties; but of this I am

* Æſculus Pavia of Linnæus, and Æſculus flava of Aiton.

not quite certain. The ſpecies that is beſt known to me is the glauca, commonly called Magnolia, Beaver-tree, and Swamp-Saſſafras. The bark of this is an agreeable aromatic, tonic, bitter medicine. It has been uſed in intermittent fevers. The flowers have a powerful and to moſt perſons an agreeable ſmell. It is an emanation which muſt be conſidered as a potent ſtimulant, or incitant. I am well acquainted with a phyſician in whom the newly-expanded flower evidently increaſed the paroxyſm of a fever which came on every afternoon; and alſo increaſed the pain of inflammatory gout. This is an intereſting fact. In Virginia, a ſpirituous tincture of the cones, or ſeed-veſſels, of the Magnolia acuminata, which is commonly called Cucumber-Tree, has been uſed, and we are told very advantageouſly, in rheumatic complaints.* The bark of the root of the Magnolia grandiflora, ſometimes called Tulip-tree, is uſed in Florida, in combination with the Snake-root, as a ſubſtitute to the Peruvian bark, in the treatment of intermittent fevers. The flowers of the Magnolia tripetala, or Umbrella-tree, have a very powerful ſmell. They often induce nauſea and head-ache.

I AM inclined to think that the Cortex Anguſturæ, which has lately been introduced into medical

* See Dr. Duncan's Medical Commentaries, for the year 1793. Vol. xviii. p. 445.

practice, and is so greatly celebrated as a tonic, by the practitioners of Britain, is the bark of some species of Magnolia.

The Liriodendron Tulipifera, well known in the United-States, by the names of Tulip-Tree, Poplar, White-Wood, &c. is very closely allied, by its botanical character, to the Magnolias. They both belong to the same class of the sexual system, and both, I believe, possess nearly the same properties. The bark of the Liriodendron is sometimes used in intermittents. Many persons are of opinion, that in this case, it is but little inferior to the Peruvian bark. I have never employed it.

The bark of the Populus tremula? or Aspin? has likewise been used in cases of intermittent fevers. This is a powerful tonic, and deserves the attention of the American physician. It has been found very useful, as a stomachic, in the diseases of our horses.

The Snake-root, the Aristolochia Serpentaria, is one of the more stimulating tonic bitters. It is certainly a valuable medicine, in the second stage of certain fevers, after the inflammatory diathesis has been removed. It was used with great benefit, in a most malignant fever, attended with carbuncles,

which prevailed at Briſtol, on the Delaware, in this ſtate, in the years 1749 and 1753. Another ſpecies of this genus, the Ariſtolochia ſipho of L'Heritier, grows in the neighbourhood of Pittsburg, and in other parts of the United-States. This is a large, climbing plant. The root has a pungent, aromatic taſte, and for certain purpoſes is perhaps preferable to the common Snake-root.

I SHALL conclude this ſubject of tonics by obſerving, that we poſſeſs a good many of the bitter plants of Europe, which have long claimed the attention of phyſicians. Our Gentians have not been carefully examined. We have one ſpecies which appears to be equal to any of the officinal kinds yet known.

SECT. III.

STIMULANTS, OR INCITANTS.

THE claſs of STIMULANTS, or INCITANTS, is ſo very extenſive, that in order to exhibit a methodical or natural medical arrangement of theſe articles, it would be neceſſary to conſider them under a number of different heads, or ſections. But this, in ſuch a ſketch as I offer you, does not appear neceſſary. I ſhall content myſelf, therefore, with ſpeaking of a few of our native ſtimulant vegeta-

bles, under the two heads of ſuch as are more general, and ſuch as are more partial, or topical, in their operation.

General Stimulants.

I think that many of our different balſamic products may, with propriety, be conſidered under the head of General Stimulants, though they are certainly not the moſt diffuſible articles of this claſs. Such is the reſin of the Populus balſamifera, called Balſam, or Tacamahaca-Tree. This is a native of North-America and of Siberia. The reſin is procured from the leaf-buds. This balſam is ſo very penetrating, that it communicates its peculiar ſmell and taſte to the fleſh of certain birds which feed upon the buds. It was formerly ſuppoſed, that the Tacamahaca of the ſhops was the produce of this tree. But it ſeems more probable that it is the produce of the Fagara octandra.

The gum-reſin which exudes from the Sweet-gum, or Maple-leaved Liquidambar-Tree, the Liquidambar Styraciflua of Linnæus, deſerves to be mentioned. The ſtorax of the ſhops is thought to be the produce of this tree: but perhaps this point is not yet quite aſcertained. I am informed that the produce of our tree has been uſed, with advan-

tage, in diarrheas. Some of our ſouthern Indians mix the dried leaves with tobacco, for ſmoking.

To the head of ſtimulants I have no heſitation in referring a number of poiſonous vegetables, with the properties of which we are not ſo well acquainted as we ought to be. Such are the Datura Stramonium, or James-town-weed, the Cicuta maculata, &c.

The Datura is one of our moſt common plants. It is certainly a medicine poſſeſſed of uſeful powers. The properties of this vegetable have lately been more ſatisfactorily inveſtigated by one of our members, Dr. Samuel Cooper.

We have ſeveral native plants of the natural order umbelliferæ. That deſcribed by the late Dr. James Greenway, under the name of Cicuta venenoſa, ſhould be carefully inveſtigated. This, from his account, muſt either be a direct ſedative, or a ſtimulant, whoſe firſt operation is very ſoon accompliſhed. It kills without inducing pain or convulſions. Perhaps the plant with which ſome of our Indians, when weary of life, deſtroy themſelves, is the ſame. It grows in meadows, and has a root like a parſnip.

Before I take leave of theſe poiſonous plants, I may mention ſome others whoſe properties are but

little known. The firſt is the Rhododendron maximum, or Pennſylvania Mountain-Laurel. This is certainly a poiſon. It is a ſpecies of the ſame genus as the Rhododendron Cryſanthmum, which has lately acquired much reputation in the cure of chronic rheumatiſm.

Nearly allied to the Rhododendron is the genus Kalmia. Of this we have ſeveral ſpecies, and all of them are poiſons. The Kalmia latifolia, or Broad-leaved Laurel, is beſt known to us. It kills ſheep and other animals. Our Indians ſometimes uſe a decoction of it to deſtroy themſelves. In the county of Lancaſter, an empiric has uſed the powdered leaves with ſucceſs in certain ſtages of fevers, and in tinea capitis. A decoction of the plant externally applied has often cured the itch; but it muſt be uſed with great care, for thus applied it has been known to occaſion diſagreeable ſubſultus, or ſtartings, and convulſions. I have given the powder of this plant internally in a caſe of fever, and have thus, at leaſt, aſcertained that it may be uſed with ſafety.

The medical properties of our different ſpecies of Andromeda and Azalea, which in botanical character are very nearly akin to the Rhododendron and Kalmia, are but little known to me. I have long ſuſpected that they are poiſons. A decoction of

the Andromeda Mariana has been found uſeful as a waſh in a diſagreeable ulceration of the feet, which is not uncommon among the ſlaves, &c. in the ſouthern ſtates.

The Gaultheria procumbens, which we call Mountain-Tea, is ſpread very extenſively over the more barren, mountainous parts of the United-States. It belongs to the ſame claſs as the plants juſt mentioned. I have made uſe of a ſtrong infuſion of this plant, which is evidently poſſeſſed of a ſtimulant and anodyne quality. I am told it has been found an uſeful medicine in caſes of aſthma. But I have not learned to what particular forms of this diſeaſe it is beſt adapted, nor in what manner it operates.

Our native ſpecies of Laurus deſerve to be inveſtigated. The Camphor and the Cinnamon belong to this genus: but hitherto, they have not been diſcovered within the limits of the United-States. The properties of the Common Saſſafras, which is a ſpecies of Laurus, have not been ſufficiently examined. It is the Laurus Saſſafras of the botaniſts. I have already mentioned the bark. Its oil ſeems to be an uſeful medicine. I have been aſſured that this oil has been found an efficacious medicine, externally applied, in caſes of wens. This looks probable; for our medicine is nearly allied to camphor, which has been uſed with advantage in

bronchocele. * I knew a woman in whom an infuſion or tea of the root of the Saſſafras always induced an oppreſſion at breaſt, with ſighing, and depreſſion of ſpirits.

During the late American war, neceſſity drove the inhabitants, in many parts of the United-States, to ſeek for a ſubſtitute for ſome of the ſpices to which they had been accuſtomed. They uſed the dried and powdered berries of the Laurus Benzoin, which we call Spice-Wood, and Wild-Alſpice-Buſh, and found them a tolerable ſubſtitute for alſpice.†

The celebrated Gynſeng, or Panax quinquefolium, may, with propriety, be thrown into the claſs of ſtimulants. I find it difficult to ſpeak of this plant with any degree of certainty. If it were not a native of our woods, it is probable that we ſhould import it, as we do the teas of China and Japan, at a high price.

The Eryngium aquaticum, or Water-Eryngo, is one of the ſtimulants which more eſpecially act as ſudorific. It is nearly allied in its qualities to the

* The oil rubbed upon the head has been found very uſeful in killing lice. The bark, eſpecially that of the root, powdered and mixed with pomatum, has the ſame effect.

† "A decoction of the ſmall twigs makes an agreeable drink in ſlow fevers, and is much uſed by the country people. It is ſaid the Indians eſteemed it highly for its medicinal virtues." Reverend Dr. M. Cutler.

contrayerva of the ſhops. It is one of the medicines of our ſouthern Indians. They uſe the decoction.

Among the more acrid ſtimulants of our country, I may mention the Arum Virginicum, or Indian-Turnip, as it is moſt commonly called. I could wiſh that the properties of this plant were examined with attention. The leaves of a plant a good deal allied to this, I mean the Dracontium pertuſum of the botaniſts, are employed, by the Indians of Demerara, in a very ſingular manner, in the treatment of general dropſy. The whole body of the patient is covered with the leaves. An univerſal ſweat, or rather veſcication, is induced, and the patient often recovers. Perhaps, it would be worth trying this practice in caſes of anaſarca, which have reſiſted the uſual modes of treatment.*

Topical Stimulants.

By the Topical Stimulants, I mean thoſe articles which more eſpecially increaſe the action or living powers of the parts to which they are applied, and which, at the ſame time, generally produce a

* This fact was communicated to me by my friend the late Mr. Julius Von Rohr, a gentleman whoſe death is a real loſs to natural ſcience, and perhaps an irreparable loſs to the intereſts of an injured and diſtreſſed part of mankind; I mean the blacks.

diſcharge of fluid from the part. The Cantharis is one of theſe articles: but of this, as an animal body, and not a native, I have nothing to ſay.

The bark of our White-Walnut, or Butternut, the Juglans cinerea of Wangenheim, is a pretty efficacious bliſter. The bark of the root is more powerful than that of the ſtem or branches. It has been applied with advantage, as a bliſter, to the bite of ſome of our venomous ſerpents.

I believe the bark of our Mooſe-wood, or Leather-wood, the Dirca paluſtris of Linnæus, is alſo a bliſter. This plant, by its botanical habit, is nearly allied to the genus Daphne, all the ſpecies of which are bliſters; eſpecially the Daphne Gnidium.

Some of our Indians make uſe of a plant, which, when maſhed a little, induces nearly as good a bliſter as the cantharides. It has been uſed with advantage in ſciatica. I do not know this plant.

The Ranunculus ſceleratus, or Celery-leaved Crowfoot, is a very acrid plant. If it be bruiſed, and laid upon any part of the body, it will, in a few hours time, raiſe a bliſter. This plant is a native of Europe and of America. The Ranunculus bulboſus, called Bulbous Crowfoot, and Butter-

cups, poſſeſſes the ſame properties. This plant grows very plentifully in our meadows and fields; but I believe it is not a native.

To this head of topical ſtimulants, I may refer ſeveral ſpecies of the genus Rhus, or Sumac; particularly the Rhus radicans, or Poiſon-vine; the Rhus Vernix, or Vernice-tree; and the Rhus Toxicodendron, or Poiſon-oak. In many perſons they induce a peculiar and very troubleſome veſcication, which I have frequently removed, in a ſhort time, by means of a mercurial waſh. Theſe plants are more active in the ſouthern than in the northern climates. They more readily poiſon immediately after than before a full meal. Their ſtimulant effect is extended beyond the ſkin. It is ſaid that the bark of one ſpecies (but I cannot tell you what ſpecies) has been found uſeful in intermittents.

Sect. IV. ERRHINES.

I have but little to ſay under the head of Errhines, or Sternutatory Medicines. Our native vegetables of this claſs, with the exception of the Tobacco, are but little known to me. Of the Tobacco, as being ſo well known to you all, I need ſay nothing.

The brown powder which is attached to the footſtalks of the leaves of the Andromeda, the Kalmia, and the Rhododendron, formerly mentioned to you, is conſiderably errhine. The powder about the ſeeds, in the ſeed-veſſels of the ſame vegetables, poſſeſſes a ſimilar quality. Whether this powder may be advantageouſly employed in practice I cannot ſay.

We have many native ſpecies of the genus Euphorbia, or Spurge. There can be little doubt, that ſome of them are ſternutative.

Sect. V. SIALAGOGA.

The number of Salivating Medicines is, I believe, much greater than has been commonly imagined. Perhaps, there are but few of the Incitant medicines which may not be ſo managed as to ſalivate. Opium, camphor, and hemloc* all induce ſalivation.

I am but little acquainted with our indigenous ſalivating vegetables. The Seneca Snake-root has long ſince been obſerved to poſſeſs this property.

* Conium maculatum.

THE Zanthoxylum Clava Herculis, or Aſh-leaved Tooth-ach-Tree, is a very powerful ſtimulant. Applied to the mouth and internal fauces, it occaſions a copious flow of ſaliva. By this property it appears to be a good deal allied to the Pyrethrum, Cochlearia, &c. I am informed that our plant is not merely an external ſialagogue, but that even when taken into the ſtomach, it exerts its effects upon the ſalivary glands. I ſpeak of the bark of the plant: but the ſeed-veſſels have the ſame property. This medicine has been given internally in caſes of rheumatiſm.

SECT. VI. EMETICS.

AMONG the indigenous vegetables of our country, there are ſeveral which are entitled to your attention as EMETICS. Such are the Euphorbia Ipecacuanha, the Spiraea trifoliata, the Aſarum Canadenſe, &c.

THE firſt of theſe, the Euphorbia Ipecacuanha, like all the ſpecies of the genus, is an extremely active plant. It is employed as an emetic by ſome of the country-people. I do not know the doſe. I ſuppoſe it is ſmall, for it belongs to the head of draſtic emetics. I am not certain that it would be a valuable addition to the materia medica; but, perhaps, it would. There are many caſes in which

we have occaſion to make uſe of immediate and active emetics; as when certain poiſons, ſuch as laudanum, &c. have been ſwallowed. In ſuch caſes it may poſſibly be of much uſe.

I CAN ſpeak with more confidence of the Spiraea trifoliata. This is a ſhrub, which grows very plentifully in various parts of the United-States. It is one of the few active plants of the claſs *Icoſandria*, to which it belongs. The root, which is the part made uſe of, like that of the officinal ipecacuanha, conſiſts of a cortex or bark, and a ligneous or woody part. The active power of the root ſeems to reſide excluſively in the bark. It is a ſafe and efficacious emetic, in doſes of about thirty grains. Along with its emetic, it ſeems to poſſeſs a tonic power. It has accordingly been thought peculiarly beneficial in the intermittent fever, and it is often given to horſes to mend their appetite. This plant has a number of different names, ſuch as Ipecacuanha, Indian-Phyſic, Bowman's Root, &c.

WE have ſeveral ſpecies of the genus Aſarum, or Aſarabacca. I am beſt acquainted with the Aſarum Canadenſe, which is well known by the name of Wild-Ginger. In Virginia it is called Coltsfoot. Both the root and leaves may be uſed. The expreſſed juice of the freſh leaves is a powerful emetic.

Some of our Indians alſo prepare an emetic from the bark of a certain vine, which a good deal reſembles the Celaſtrus ſcandens of Linnæus. This vine bears bunches of red berries of a ſweetiſh taſte, but of a poiſonous nature. I know nothing of this plant from my own experience; but a gentleman * who has uſed it prefers it to every other emetic. The Indians make a decoction of the bark. A large doſe is required to produce the effect. This is certainly an objection againſt its uſe.

A decoction of the Eupatorium perfoliatum, or Thorough-wort, is alſo emetic. I might have obſerved, that this plant is uſed by our Indians as a medicine in intermittent fevers.

The root of the Sanguinaria Canadenſis † has been mentioned to me as an emetic. I know nothing particular of this property of the plant. I ſhould have obſerved, under the head of General Stimulants, that the ſeeds appear to poſſeſs nearly the ſame quality as the ſeeds of the Datura Stramonium.

I have been aſſured, that the Six-Nations make uſe of at leaſt twelve or fourteen different emetics.

* Mr. John Heckewelder.

† Called, in the United-States, Indian-Paint, Puccoon, Turmeric, &c.

All them, except the ſulphat of iron, are vegetables. It is probable that the Spiraea, Euphorbia Ipecacuanha, &c. are among the number of theſe vegetable emetics.

I SHALL conclude this ſubject of emetics by recommending to your attention an examination of the properties of ſome of our native ſpecies of Viola, or Violet. I ſuſpect it will be found, that the roots of ſome of theſe are endued with an uſeful emetic quality.

SECT. VII. CATHARTICS.

WE have many indigenous CATHARTICS. Some of them are well worthy of your attention. Theſe may be divided into two kinds, the milder, and the more draſtic.

AMONG the more mild, I may mention the Triofteum perfoliatum, ſometimes called Baſtard-Ipecacuanha. This, when given in very large doſes, ſometimes proves emetic; hence the vulgar name. But I find it a good cathartic. The cortex, or bark, of the root is employed. I give it in doſes of twenty and thirty grains. On ſome occaſions, it has ſeemed to operate as a diuretic. But this may have been only an accidental circumſtance. Rhubarb ſometimes produces the ſame effect, as has been obſerved by C. Piſo.

NEARLY allied to the Triosteum, I mean in its properties, is the Asclepias decumbens. This is one of our most beautiful and common plants. It has received many vulgar names, such as Pleurisy-root, Flux-root, Butterfly-weed, &c. It has been much celebrated in Virginia, as a remedy in dysentery. I have used it, and I think with advantage. I believe it does good principally by its purgative quality. The dose is from twenty to thirty grains of the root in powder. A great deal has been said about the virtue of this vegetable in pleurisy.

THE powder of this Asclepias is escarotic, and has been found useful in restraining fungous flesh in ulcers. I believe this, and not the Poke, as has been supposed, is the plant which is employed by our southern Indians in cases of venereal chancre.

THE dried fruit of our Papaw, or Custard-apple, the Annona triloba of Linnæus, is likewise purgative. I can say nothing of it from my own experience.

I KNOW nothing, from experience, of the *Mechameck*, or Wild-Rhubarb, of some of our Indians. It is, certainly, a species of Convolvulus, or Bind-weed, and I believe the Convolvulus panduratus, which in Virginia is called "wild potatoe." Its name Wild-Rhubarb, implies that it is a purgative. An ex-

tract but little, if any thing, inferior to the Scammony of the ſhops, has been procured from one of our ſpecies of Convolvulus. One muſt have a good deal of *medical faith* to believe what Cateſby has ſaid concerning the remarkable power of the Convolvulus purpureus, or Purple-Bindweed.*

More active than any of the native purgatives which I have mentioned is the Podophyllum peltatum of Linnæus. This is a very common plant through the whole of the United-States, and in other parts of North-America. It is known by a variety of names, ſuch as May-apple, Mandrake, Ipecacuanha, Wild-lemons, &c. The fruit is eſculent, and by many perſons is thought delicious. The leaves are poiſonous.—It is the root which is uſed in practice. In doſes of twenty grains, it is an excellent cathartic. It has ſome advantages over the rhubarb and jallap. It is moſt advantageouſly uſed in combination with calomel, or the cryſtals of tartar. I have heard much of the virtues of an extract prepared of this root; but have never uſed it.

There is a plant which was thought by Linnæus to be a ſpecies of the ſame genus. He called it Podophyllum diphyllum. I have ſhown, that it is

* The Natural Hiſtory of Carolina, &c. Vol. i. p. 35.

a new genus.* I have not been able to collect a sufficient quantity of this to ascertain its powers; but, judging by the taste and smell, which it must be confessed are sometimes fallacious tests, I suspect its root possesses the virtues of the May-Apple, or Podophyllum peltatum.

The Cassia Marilandica, one of our finest plants, belongs to the same genus as the senna of the shops. The American species possesses nearly the same virtues as the eastern species. It is used as a purgative in different parts of the United-States.

An extract prepared from the inner bark of the Juglans cinerea, or Butternut-Walnut, has long been used as a purgative in the United-States. It is a valuable medicine. As it is often, however, very carelessly prepared by the country-people, it has gone into some kind of neglect. It ought to be prepared by the better informed apothecaries, and have a place in the Pharmacopœia of this country, WHEN SUCH A DESIDERATUM SHALL BE SUPPLIED. The dose of this extract is from ten to thirty grains. I have thought it possesses something of an anodyne property.

I have been told, that some of our Indians use as a cathartic a decoction of the bark of the root of

* See Transactions of the American Philosophical Society: Vol. III. No. XLI.

the Dirca paluſtris, or Leather-wood, already mentioned to you. Of this property of the Dirca I know nothing farther.

THE decoction or powder of the root of the Polygala Senega, or Seneca Snake-root, is alſo a purgative. Dr. Cullen, indeed, thinks its purgative is its moſt ſtriking property, and therefore he arranges it under his head of cathartics.*

SOME of our native ſpecies of Iris, or Flag, are powerful cathartics. Such are the Iris verſicolor and the Iris verna. They are both uſed by our ſouthern Indians.† I can ſay nothing certain concerning the doſe of theſe vegetables. It is doubtleſs ſmall, for they are very active plants. Several of the European ſpecies of Iris are irritating cathartics.

A SPECIES of Croton, or perhaps of Stillingia, is uſed in the ſouthern ſtates, as a cathartic. It enters into the compoſition of a medicine which has acquired much celebrity in the cure of that hideous diſeaſe the Frambæſia, or Yaws. This plant grows

* "I have put it into the catalogue of purgatives, as this is the only operation of it that is conſtantly very evident; and perhaps all its other virtues depend upon this." A Treatiſe of the Materia Medica. Vol. II. p. 532. Edinburgh: 1789, quarto.

† Mr. William Bartram.

ſpontaneouſly on the dry, high lands of Carolina, Georgia, and Florida. It is called Yaw-weed, and Cock-up-Hat. The Stillingia ſylvatica, perhaps the very plant I have been ſpeaking of, is ſaid to be a ſpecific in the venereal diſeaſe.*

Sect. VIII. DIURETICS.

Diuretics have ſo long been employed with benefit, in the treatment of dropſies, that it becomes a matter of conſequence to increaſe the number of the medicines of this claſs, and to learn how to exhibit, with more advantage, thoſe which are already known. I do not mean by this obſervation to aſſert, that dropſies cannot be cured without the uſe of diuretic medicines. On the contrary, I am perſuaded that they can, and often are, eſpecially when the dropſy depends upon fever, or is connected with it. But in the management of all kinds of dropſies, it is often neceſſary to have recourſe to the uſe of diuretics, and I believe that ſome of the worſt forms of this diſeaſe, ſuch as hydrothorax, are moſt effectually cured by theſe medicines. The Digitalis purpurea, ſo much and ſo juſtly celebrated at preſent, is not, to my knowledge, a native of any part of

* Bernard Romans ſays, the Jallap grows wild near Penſacola, in Florida.

America.* But we have ſeveral native diuretics, which deſerve the attention of our phyſicians. Such are the Seneca-Snake-root, the Lobelia ſiphilitica, the Serratula ſpicata, the Caſſena, and others.

The firſt of theſe, the Polygala Senega of the botaniſts, along with its diuretic, poſſeſſes an emetic, cathartic, expectorant, ſalivating, and diaphoretic power. I have already hinted at its ſalivating and cathartic operation. As a diuretic, it has been employed, and found uſeful, in dropſy, by Tennent, Bouvart, and other writers. I am informed that it has lately been uſed, with great ſucceſs, in the treatment of the cynanche trachealis, or croup, by Dr. Archer of Maryland. He uſes a ſtrong decoction of the root, which operates as an emetic, cathartic, and expectorant.† This medicine ſometimes operates ſo powerfully as a ſudorific, that I have been aſſured it has been known to remove portions of the mucous body, or rete mucoſum, from

* This plant, however, bears extremely well the open ground of Pennſylvania.

† There is a ſpecies, or rather variety, of croup, which I have ſometimes called the Bronchial Hives. In this there does not appear to be any reaſon to ſuſpect the exiſtence of a preternatural membrane in the trachea: but the diſeaſe depends upon the preſence of large quantities of mucus, which exiſts in a looſe ſtate in the ramifications of the trachea. I believe this ſpecies is much more common than the other, which might be called Cynanche trachealis coriacea. In the bronchial hives, I have found ſtrong coffee of evident uſe: but the diſeaſe often requires a much more active treatment. The Seneca ſhould have a trial.

the ſkin of blacks who have uſed it. I do not vouch for the truth of this fact: but I muſt confeſs that to me the circumſtance does not ſeem improbable. Our Indians uſe a decoction of this root in ſyphilis. I have no confidence in the powers which have been aſcribed to the Seneca, in curing the bite of the rattle-ſnake. Beſides the Polygala Senega, we have ſeveral other native ſpecies of this genus. I do not know how far they poſſeſs the powers which have been aſcribed to the Seneca itſelf. It is probable that they only differ in degree. Kiernander, a long time ago, remarked that the Polygala vulgaris, which grows ſpontaneouſly in Europe, poſſeſſes, though in a leſs eminent degree, the virtues of the celebrated American ſpecies.*

The Lobelia ſiphilitica is alſo conſiderably diuretic. This plant was purchaſed from the northern Indians, by the late Sir William Johnſon, as a remedy in the venereal diſeaſe: hence its ſpecific name, ſiphilitica. I do not believe, after paying ſome attention to the ſubject, that this plant has cured confirmed ſyphilis. I know that the Indians, even thoſe who are beſt acquainted with the plant, are glad to have an opportunity of applying to the whites for relief, when they have the diſeaſe. They certainly do not truſt the cure entirely to the Lobe-

* See his paper, entitled Radix Senega, in the ſecond volume of the Amoenitates Academicæ.

lia. They uſe the bark of the wild cherry (Prunus Virginiana), the root of the May-apple (Podophyllum peltatum), and many other plants.* I believe, however, that the Lobelia has been of ſervice in the diſeaſe. In gonorrhea it has certainly performed a cure; but the tendency of the conſtitution, unaided by medicines, to get rid of this complaint, is well known. I may here obſerve, that gonorrhea appears to be much more common among the Indians than ſyphilis. The Lobelia ſeems to operate chiefly by its diuretic quality. From their ignorance of botany, many perſons in the weſtern country have been uſing a plant, which they call Lobelia, in the ſame complaints. I have received ſpecimens of the plant under the name of Lobelia. It proves to be the Serratula ſpicata, or Spiked Saw-wort. There is good reaſon to believe, that it has been found uſeful, not only in venereal complaints, but alſo in caſes of nephritis calculoſa, or gravel. Thus ignorance ſometimes leads to knowledge. This ſuppoſed Lobelia is a powerful diuretic. The Indians ſometimes drink the decoction of it ſo ſtrong that it occaſions gleets.† It is the root of the plant

* I do not believe that the diſeaſe of ſyphilis was known among the North-American Indians before they became acquainted with the whites. Mr. John Heckewelder informs me, that the Indians ſpeak of it as a foreign diſeaſe communicated by the whites.

† They cure theſe gleets by eating turpentine, as I am informed by Colonel Winthrop Sargent. An old Indian aſſured this gentleman, that

which is commonly employed, but the flowers and the leaves may alſo be uſed.

An infuſion of another ſpecies of Lobelia, I believe the Lobelia inflata, has been found very uſeful in the leucorrhoea, or whites. It is a lacteſcent, and very active plant. I do not know that this acts as a diuretic, and it would have been more proper to have mentioned the plant under the head of ſtimulants.

The Caſſena is a ſpecies of Ilex, or Holly. It is the Ilex vomitoria of Aiton, and is a native of Carolina, Weſt-Florida, &c. It has been called South-Sea-tea, or Evergreen Caſſine. It is thought to be one of the moſt powerful diuretics hitherto diſcovered. It is held in great eſteem among the ſouthern Indians. They toaſt the leaves and make a decoction of them. It is the men alone that are

a decoction of this Serratula cures ſyphilis in all its forms. Dr. Alliſon, one of the army-phyſicians, has an high opinion of the plant, in this diſeaſe. I am told Dr Bedford, of Pittſburg, has found it an efficacious medicine in the gravel. It certainly ought to have a fair trial in theſe diſeaſes. The late Major Jonathan Hart aſſured me, that the Indians northweſt of the Ohio could not cure confirmed ſyphilis. He ſaid the Lobelia (I ſuppoſe the Serratula ſpicata) had been of ſervice in ſlight caſes: but he was perſuaded that the Indians would fall victims to the general complaint, if they were to truſt wholly to their own remedies. A Mr. Wilſon, who is well acquainted with the Indians, particularly the Delawares and Shawneeſe, moſt confidently aſſerts, that they cannot cure the venereal diſeaſe, "when it gets into the blood;" but that they can cure the gonorrhea. He alſo ſaid, they can remove the venereal diſeaſe for a time, but "that it will break out again."

permitted to drink this decoction, which is called Black Drink.

The Medeola Virginica grows plentifully in the vicinity of this city, and in almoſt every other part of the United-States. Its root is white, and taſtes a good deal like the cucumber, which has given the plant the name of Cucumber-root. I am told that this root is diuretic, and has cured dropſies. The ſenſible qualities of the plant do not promiſe much; but this does not prove that it is not an uſeful medicine.

Sect. IX. ANTHELMINTICS.

Of the claſs of medicines called Anthelmintics, or deſtroyers and expellers of worms, we have ſeveral which are entitled to your notice. One of the moſt celebrated of theſe is the Carolina Pink-root, the Spigelia Marilandica of Linnæus. This is a very common plant in our ſouthern ſtates. It is a valuable medicine, as has been demonſtrated by the phyſicians of Europe and of this country. It is commonly given in the form of an infuſion, or tea; but I prefer the exhibition of it in powder. It has been accuſed of occaſioning, for a ſhort time, a diſagreeable affection of the eyes. But this effect may often be prevented by combining with the Spigelia ſome of the common Virginia Snake-root. The

Cheerake-Indians have ſo high an opinion of this plant, that it would ſometimes be dangerous for a perſon to be detected in digging it up, to carry it out of the country. The whites learned the anthelmintic powers of this vegetable from the Indians. The Spigelia is ſaid to poſſeſs other valuable properties. Infuſed in wine, it has been found an uſeful medicine in intermittent fevers. But I can ſay nothing particular concerning the preciſe mode of adminiſtering it in this caſe.

The Chenopodium anthelminticum grows plentifully in the United-States. It is commonly called Worm-ſeed. The whole plant has a moſt powerful ſmell, of which it is very retentive. The taſte is bitter, with a good deal of aromatic acrimony.

The root of the May-apple, (Podophyllum peltatum), which I have mentioned to you under the head of cathartics, has often been found to operate as an anthelmintic. It is uſed as ſuch by the Cheerake, and other ſouthern Indians. Whether it operates by its cathartic quality excluſively, or partly by ſome other quality, deleterious to the worms, I cannot ſay. The whites learned from the Indians the anthelmintic power of this plant.*

* The beſt time for gathering the may-apple, for medical purpoſes, is the autumn, when the leaves have turned yellow, and are about falling off. The Indians dry it in the ſhade, and powder it for uſe.

The Helleborus fœtidus, or Stinking Hellebore, has been mentioned as a powerful anthelmintic, by Biſſet, and other European writers. It has been uſed in this country, and has been found very efficacious. It is ſuppoſed to have been the worm-medicine of a Dr. Witt, who acquired much reputation by the uſe of it.*

The Cheerake uſe a decoction of the root of the beautiful Lobelia Cardinalis, or Cardinal-Flower, as a remedy againſt worms. I have already mentioned the diuretic quality of another ſpecies of this genus, the Lobelia ſiphilitica.

The ſeeds of the Common Tobacco (Nicotiana Tabacum) have alſo been found uſeful as an anthelmintic.

The Silene Virginica, or Ground-Pink, as it is called in ſome parts of our country, is another native anthelmintic. A decoction of the root is uſed, and is ſaid to have been found a very efficacious remedy.†

* I am indebted to Dr. Adam Kuhn for this information. He ſays that Witt uſed the powder of the leaves in combination with the ethiops mineral.

† From the information of my friend the late Dr. James Greenway, of Virginia.

I HAVE not loſt all confidence in the anthelmintic powers aſcribed to the Polypodium vulgare, or Male-Fern. I do ſuppoſe, however, that too much has been aſcribed to this plant. We have ſeveral native ſpecies of this genus, which it would, at leaſt, be a matter of curioſity to examine. The Polypodium Virginianum grows about this city, and probably poſſeſſes the ſame powers as the European ſpecies.

A PLANT, called the "Pride of India," has lately been mentioned as an excellent anthelmintic. The bark of the root has been uſed as ſuch in South-Carolina. This vegetable, the Melia Azedarach of Linnæus, is not a native of our country.*

I SHALL conclude this account of anthelmintics by obſerving, that the ſouthern Indians dreſs all their diſhes, prepared of the Indian-corn, or maize, (Zea Mays) with a ſtrong lixivium, or lye, of the aſhes of bean-ſtalks and other vegetables, in order to prevent the generation of worms. They are of opinion that this grain nouriſhes the worms exceedingly. Nor is this opinion peculiar to the Indians.

* Mr. Andrew Michaux informed me, that in Perſia, where this plant grows ſpontaneouſly, the pulp which inveſts the ſtone of the ſeed is pounded with tallow, and uſed as an "antiſphoric," in caſes of tinea capitis in children.

I HAVE thus, Gentlemen, endeavoured to preſent you with a ſpecimen, or rather rude outline, of an Eſſay towards a Materia Medica of the United-States. My object has been a collection of facts. I could have wiſhed for more leiſure to have purſued the ſubject: but that leiſure I do not poſſeſs. I hope, however, that with all its imperfections, I have preſented you with a ſketch which will not prove unacceptable to you. I have opened a path which deſerves to be trod by you all.

THE man who diſcovers one valuable new medicine is a more important benefactor to his ſpecies than Alexander, Cæſar, or an hundred other conquerors. Even his glory, in the eſtimation of a truly civilized age, will be greater, and more laſting, than that of theſe admired ravagers of the world. I will venture to go farther. All the ſplendid diſcoveries of Newton are not of ſo much real utility to the world as the diſcovery of the Peruvian bark, or of the powers of opium and mercury in the cure of certain diſeaſes. If the diſtance of time, or the darkneſs of hiſtory, did not prevent us from aſcertaining who firſt diſcovered the properties of the Poppy, that "ſweet oblivious antidote" for alleviating pain, and for ſoothing, while the memory remains, thoſe rooted ſorrows which diſturb our happineſs; if we could tell who firſt diſcovered the mighty ſtrength of Mercury in ſtrangling the hydra

of pleaſures and of generation; if we could even aſcertain who was the native of Peru, that firſt experienced and revealed to his countrymen the powers of the Bark in curing intermittent fevers; would not the civilized nations of mankind, with one accord, concur in erecting durable monuments of granite and of braſs to ſuch benefactors of the ſpecies? Would not even the ſavage, who wants not a ſenſe of benefits conferred upon him, be ſeen to form the tumulus of ſtones, or to raiſe the green ſod, the only monuments his humble condition would admit of his erecting? And may we not yet look for the diſcovery of medicines as important to mankind as opium, the bark, and mercury?

For this purpoſe, the diſcovery of new and valuable medicines, your ſituation, Gentlemen, (I addreſs myſelf at preſent, more eſpecially to the younger part of my audience); for this purpoſe, your ſituation is peculiarly happy. In the purſuit of one of the moſt dignified and moſt uſeful of all the ſciences, you are placed in an extenſive country, the productions of which have never been inveſtigated with accuracy, or with zeal. From this ſchool, I will venture to call it the *punctum ſaliens* of the ſcience of our country, you are to ſpread yourſelves over the happieſt and one of the faireſt portions of the world. In whatever part of this vaſt continent you may be placed, you will find an abun-

dant field of new and intereſting objects to reap in. The volume of nature lies before you: it has hardly yet been opened: it has never been peruſed. But by your aſſiſtance, the knowledge of the natural productions of our country may be greatly extended, and travellers ſhall then no longer upbraid us with an utter ignorance of the treaſures which an all-benevolent Providence has ſo largely beſtowed upon us. May I not flatter myſelf that among the number of thoſe whom I am now addreſſing, there are ſome of you for whom medical diſcoveries of importance are reſerved? diſcoveries which would add a luſtre to your names, whilſt they would enſure to you that which is much more to be deſired, in this mixed ſcene of affairs, an happineſs that is imboſomed in the happineſs of one's country, and the world.

APPENDIX,

CONTAINING

ILLUSTRATIONS AND ADDITIONS.

PAGE 14. "I am well acquainted with a phyſician," &c. The room in which the flowers of the Magnolia glauca produced the effects here mentioned, was not a ſmall one, and was well aired. It was in the month of June.

I ought to have obſerved, under the head of Tonics, that the Menyanthes trifoliata, or Marſh-Trefoil and Bog-bean of the Engliſh, is a native of our country. It grows ſpontaneouſly in Pennſylvania. This is certainly an active plant, and if we can depend upon the half of what has been ſaid of its virtues, it deſerves a place in the Pharmacopœia of every country.

Page 18. Dr. Samuel Cooper. See his valuable Inaugural Diſſertation on the Properties and Effects of the Datura Stramonium, &c. Philadelphia; 1797.

Page 18. Cicuta veneneſa. In Virginia, this plant is called Wild-Carrot, Wild-Parſnip, Fever-Root, and Mock-Eel-root. See Tranſactions of the American Philoſophical Society. Vol. iii. No. xxix.

Page 19. Kalmia latifolia. In South-Carolina, this beautiful ſhrub is called " Calico-Tree."

Pages 19, 20. " A decoction of the Andromeda Mariana has been found uſeful as a waſh, in a diſagreeable ulceration of the feet, which is not uncommon among the ſlaves, &c. in the ſouthern ſtates." This complaint is very common, particularly among the negroes, and the poorer ſort of white people, in Carolina, Georgia, &c. It is called " Toe-Itch and Ground-Itch." It is a kind of ulcerous excoriation between the toes, ſometimes extending as high as the inſtep, and is attended with moſt intolerable itching. It is probably, in a great meaſure, the conſequence of inattention to cleanlineſs. Is it occaſioned by particular inſects? Some perſons, with whom I have converſed on the ſubject, are of opinion, that it is owing to the great warmth of the waters to the ſouthward, in which the inhabitants are accuſtomed to wade a great deal. The diſeaſe is ſometimes ſeen in Pennſylvania. Beſides the Andromeda Mariana, or Broad-leaved Moor-wort, a decoction of the leaves of the Kalmia latifolia is uſed for the cure of this complaint. The decoction of the leaves of both theſe plants is uſed. They are both called " Wicke" to the ſouthward.

Page 21. " I knew a woman," &c. She was a ſtout, and ſeemingly very hearty, woman. She informed me, that a lady of her acquaintance was affected in the ſame way by this tea. I could not learn whether the flowers of the Saſſafras produced a ſimilar effect.

Page 24. Rhus, or Sumac. " It is ſaid that the bark of one ſpecies (but I cannot tell you what ſpecies) has been found uſeful in intermittents." Perhaps it is the

bark of the Rhus glabrum, or Smooth Pennſylvania Sumac. In ſome parts of our country, this ſpecies is called "Indian Salt." Was it uſed as a condiment to their food by the Indians? The berries of this ſpecies are uſed as a mordant, or fixer, for the red colour with which they die their porcupine quills. They uſe other mordants for the ſame purpoſe. The juice of the Upland-Sumac (Rhus glabrum?) is ſaid to be excellent for removing warts, and alſo tetters. It is applied to the affected parts.

Page 27. "The expreſſed juice of the freſh leaves" of the Aſarum Canadenſe, "is a powerful emetic." I ſhould have obſerved that the leaves are errhine. "Aſari canadenſis radices ſuaveolentes in petio vino fermentanti immerſæ, liquorem gratiorem reddunt." Cornutus, as quoted by Schoepf, p. 73.

Page 30. Aſclepias decumbens.—The Aſclepias decumbens, and the Aſclepias tuberoſa, of Linnæus, appear to me to be merely varieties of the ſame ſpecies. Dr. Schoepf (page 160) mentions a plant which he ſays is called in Maryland, Butterfly-root, and Pleuriſy-root. He ſays he has not ſeen the plant; but that the name Butterfly-root ſeems to ſhew that it belongs to the claſs of Diadelphia. I ſuſpect this plant is no other than the Aſclepias decumbens. It is called Butterfly-weed, &c. becauſe its flowers are often viſited by the butterflies.

Page 35. Polygala Senega. If this plant has been found ſo uſeful in pleuriſy as it is ſaid to have been, by Tennent, and other writers, I cannot ſuppoſe it has been in genuine inflammatory pleuriſy, unleſs previouſly to the

exhibition of the medicine, the lancet has been liberally uſed. In the pleuriſy, as it is called, which prevails in the low and marſhy countries, it is not improbable it has been of real uſe. This is a true intermittent or remittent, attended with a local pain, either in the ſide, or in the head. When it is in the head, the diſeaſe is called (a ridiculous name) the pleuriſy in the head. In either caſe, it is a complaint in which cordial medicines, and ſuch the Seneca is, have been exhibited with advantage.

Almoſt an hundred years ago, the Reverend Dr. Cotton Mather mentioned an American plant, called "Partridge-berries," as being excellent for curing dropſy. A decoction of the leaves is to be drank as a tea, for ſeveral days. It diſcharges, he ſays, a vaſt quantity of urine, as long as the diſeaſe laſts, "after which it may be drank without provoking urine obſervably. Gouty perſons drink it with benefit."* I take the plant mentioned by Mather, to be the Mitchella repens of Linnæus. This is a very common plant in every part of the United-States. In New-England, it is called Partridge-berry. Cateſby has given us a wretched figure of it. I know nothing of the powers of this plant. I could mention ſome of the ſuperſtitious notions of our Indians concerning it.

Page 40. Chenopodium anthelminticum. This is alſo called Jeruſalem-oak. It is the ſeeds that are uſed.

* The Philoſophical Tranſactions, Abridged. Vol. V. Part ii. p. 160.

THE END.